SOV/4110

PHASE I BOOK EXPLOITATION

Tarasenko, Nataliya Yuvenal'yevna, and Mariya Alekseyevna Khodyreva

Zashchita ruk pri rabote s radioaktivnymi veshchestvami (Protection of the Hands in Work With Radioactive Substances) Moscow, Medgiz, 1960. 17 p. 10,000 copies printed.

Ed.: S. P. Landau-Tylkina; Tech. Ed.: A. I. Zakharova.

PURPOSE: This booklet is intended for personnel working in laboratories, hospitals, and clinics where radioactive substances are used.

COVERAGE: General and personal protective measures against radioactive contamination are described. Ways of treating the skin and the preperation of various cleansing agents for hands contaminated by several different radioactive substances are indicated. The permissible degree of contamination and dosimetric control are also covered. No personalities are mentioned. There are 11 references: 8 Soviet, 1 French, and 2 English.

TABLE OF CONTENTS: None given [The booklet is divided as follows]

Card 1/2

Protection of the Hands (Cont.)

AVAILABLE: Library of Congress (RA1231.R2T3)

Card 2/2

JA/cdw/ec
8-24-60

TARASENKO, Natal'ya Yuvenal'yevna; NOVIKOV, Yu.V., red.; LYUDKOVSKAYA, N.I., tekhn. red.

[Industrial hygiene in connection with gamma defectoscopy of metal articles] Gigiena truda pri gamma-defektoskopii metallicheskikh izdelii. Moskva, Medgiz, 1960. 59 p. (MIRA 15:2)
(GAMMA RAYS—INDUSTRIAL APPLICATIONS)
(GAMMA RAYS—SAFETY MEASURES)

TARASENKO, Natal'ya Yuvenal'yevna; PROSTAKOVA, Iraida Grigor'yevna; RYNKOVA, Nina Nikolayevna; BURNAZYAN, A.I., red.; NOVIKOV, Yu.V., red.; ZUYEVA, N.K., tekhn.red.

[Industrial hygiene at atomic electric stations] Gigiena truda pri rabote na atomnykh elektrostantsiiakh. Pod red. A.I.Burnaziana. Moskva, Gos.izd-vo med.lit-ry, Medgiz, 1960. 151 p. (MIRA 14:3)

(ATOMIC POWER PLANTS--HYGIENIC ASPECTS)

TARASENKO, N.Yu. (Moskva)

Toxicity of thorium. Gig. truda i prof. zab. 4 no.6:21-27 Je '60.
(MIRA 15:4)

(THORIUM--TOXICOLOGY)

GORODINSKIY, S.M., red. toma; PARKHOMENKO, G.M., red. toma; TARASENKO, N.Yu., red. toma; MAREY, A.N., red. toma; ROZANOV, M.S., red.; KUZ'MINA, N.S., tekhn. red.

[Radiation hygiene] Radiatsionnaia gigiena. Moskva, Medgiz, Vol.1. [Industrial hygiene] Gigiena truda. 1962. 231 p. Vol.2. [Communal hygiene] Kommunal'naia gigiena. 1962. 223 p.
(RADIATION PROTECTION) (MIRA 15:7)

TARASENKO, Natal'ya Yuvenal'yevna; MEL'NIKOVA, A.I., red.; POPOVA, S.M., tekhn. red.

[Industrial hygiene in handling thorium] Gigiena truda pri rabote s toriem. Moskva, Gosatomizdat, 1963. 86 p. (MIRA 17:1)

(Thorium--Safety measures)

TARASENKO, O.

Hail, Bharat! Znan. ta pratsia no.6:23-25 Je '62. (MIRA 16:7)

(India—Description and travel)

TARASENKO, O. I.

TARASENKO, O. I. -- "The Action of the Catalase of Hemolyzed and Non-hemolyzed Erythrocytes of the Blood of Farm Animals and Certain Fur-Bearing Animals. Effect of Salts on the Action of the Catalase." Sub 16 Jun 52, Moscow Fur and Pelt Inst. (Dissertation for the Degree of Candidate in Biological Sciences).

SO: Vechernaya Moskva January-December 1952

Catalase in fur-bearing animals. O. I. Tarasenko. *Trudy Moskov. Pushno-Mekhovogo Inst.* 3, 858-60(1954). In rodents the activity of catalase (I) of ruptured and unruptured erythrocytes is easily detected by its intensive decompn. of H_2O_2. I activity among canines is found only in certain mongrels and is not detected in sables or minks. The data indicate either that I does not appear to be a necessary link in the oxidation-reduction system and that not all animals contain it in their erythrocytes, or that a more precise method of detection is necessary. With an increase in temp. up to 20°, the activity of I increases in contradiction to the opinion of A. N. Belozerskii and N. I. Proskuryakov that the optimum temp. of I activity is 0-10°.

D. M. Chern

PROKOPENKO, A.P. [Prokopenko, O.P.]; TARASENKO, O.O.

Colorimetric method for quantitative determination of coumarins. Farmatsev. zhur. 17 no.6:18-22 '62. (MIRA 17:6)

1. Khar'kovskiy nauchno-issledovatel'skiy khim'ko-farmatsevticheskiy institut.

TARASENKO, O. P.

Tarasenko, O. P. -- "Endemic Goiter of the City of Tashkent and the Tashkent Oblast and Its Morphological Characteristics." Tashkent State Pedagogical Institute V. P. Molotov, Tashkent, 1955 (Dissertation for the Degree of Candidate of Veterinary Sciences)

SO: Knizhnaya Letopis', No. 24, Moscow, Jun 55, pp 91-104

T-7

USSR/Human and Animal Physiology - Internal Secretion.
The Thyroid.

Abs Jour : Ref Zhur - Biol., No 18, 1958, 84365

Author : Tarasenko, O.P.
Inst :
Title : The Morphology of Normal Thyroids in the Inhabitants of an Endemic Goiter Focus, the City of Tashkent and Tashkent Oblast'.

Orig Pub : Med. zh. Uzbekistana, 1957, No 8, 57-62.

Abstract : The thyroid's (T) weight curve in terms of age is considerably higher in native inhabitants of Tashkent (city and oblast') than in new arrivals. Among natives the average weight of T is 33.5 gr, and in newcomers it is 18.5 gr. Microscopic examinations of T revealed delayed differentiations of thyroidal parenchyma as compared to T of people living in localities free from goitrous endemism. Most frequently, goitrous transformation is found in children

Card 1/2

USSR/Human and Animal Physiology - Internal Secretion. T-7
The Thyroid.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 84365

of the age groups 5-7 and 14-18 years. About 16.1 percent of them were found to be afflicted with the disease. The parenchymateous T type prevailed among children; in them, the transition to a colloidal structural type was clearly delayed as compared to norm. In adults, the basic T type is microfollicular. However, in the majority of cases vacuolation of colloids is found to exist which is accompanied by proliferation of thyroidal epithelia. -- B.V. Aleshin

Card 2/2

TARASENKO, O.P., assistent

Immediate and late results of treating a hydatid mole. Ped., akush. i gin. 20 no.5:55-58 '58. (MIRA 13:1)

1. Kafedra akusherstva i ginekologii (zav. kafedroy - prof. L.B. Teodor) Chernovetskogo meditsinskogo instituta (direktor - dots. M.M. Kovalev) i kafedra akusherstva i ginekologii (zav. - prof. V.M. Khmelevskiy) Kiyevskogo instituta usoverhenstvovaniya vrachey (direktor - dots. V.D. Bratus').

(UTERUS--TUMORS)

TARASENKO, O.P., assistent; FIL'TSER, I.I., student

Diagnosis of the escape of the amniotic fluid by means of determination of crystals in natural smears. Akush.i gin. 35 no.6:56-60 N-D '59. (MIRA 13:4)

1. Iz kafedry akusherstva i ginekologii (zaveduyushchiy - prof. L.B. Teodor) Chernovitskogo meditsinskogo instituta.
(VAGINAL SMEARS in pregn.)
(AMNIOTIC FLUID)

TARASENKO, O.P.

Malignant degeneration of aberrant thyroid glands. Probl. endok. i gorm. 10 no.6:7-9 N-D '64. (MIRA 18:7)

1. Kafedra onkologii (zav. - prof. I.M.Vorontsov) Zaporozhskogo instituta usovershenstvovaniya vrachey imeni Gor'kogo.

ACC NR: AP7004553 SOURCE CODE: UR/0185/66/011/007/0797/0801

AUTHOR: Golik, A. Z.; Cholpan, P. P.; Tarasenko, O. V.

ORG: Kiev State University im. T.H. Shevchenko (Kyyvs'kyy derzhuniversytet)

TITLE: Velocity of ultrasonic vibrations and compressibility of liquid siloxanes

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 7, 1966, 797-801

TOPIC TAGS: siloxane, temperature dependence, ultrasonic vibration

ABSTRACT: The authors investigated the temperature dependence (within the range of 0 - 200°C) between the velocity of ultrasonic vibrations and the adiobatic compressibility of linear methylsiloxanes - octamethyltrisiloxane, decamethyltetrasiloxane, dodecamethylpentasiloxane, cyclic methylsiloxanes - octamethylcyclotetrasiloxane, decamethylcyclopentasiloxane, and methylphenylsiloxanes - heptamethylphenyltrisiloxane, pentamethyltriphenytrisiloxane, octamethyldiphenyltetrasiloxane.

It is determined that the temperature dependence of ultrasonic velocity at high temperatures deviates from the linear dependence. The adiobatic compressibility obeys an exponential law over a small range of temperatures only. It is shown that the compressibility of siloxanes decreases with the increase of the intermolecular force potential and the co-ordination number.

Orig. art. has: 4 figures, 3 formulas and 2 tables. [JPRS: 37,330]

SUB CODE: 20,07 / SUBM DATE: 11Dec65 / ORIG REF: 009

Card 1/1 0936 1382

NOSOV, V.A., kand. tekhn. nauk; MAMUTA, G.D.; TARASENKO, O.V.

Ultrasonic meter of sand concentration in pipes of dredges.
Avtom. i prib. no.4:62-64 O-D '63. (MIRA 16:12)

1. Institut avtomatiki Gosplana UkrSSR.

ZHODZISHSKIY, I., kand. tekhn. nauk; TARASHKO, P., inzh.; BRAUNSDORFER, I., inzh.; ZAYTSEV, V., inzh.

Condition of the structural elements in an experimental apartment house made of monolithic three-dimensional elements. Zhil. stroi. no.11:6-9 '64 (MIRA 18:2)

POL'SHIN, D.Ye.; RUDNITSKIY, N.Ya.; TARASENKO, P.P.; REYNISH, V.P.

Testing elements of large-panel buildings on a compressed foundation. Osn. fund. i mekh. grun. 5 no.3:21-22 '63. (MIRA 17:1)

1. Nauchno-issledovatel'skiy institut osnovaniy i podzemnykh sooruzheniy (for Pol'shin, Rudnitskiy). 2. Moskovskiy institut tipovogo i eksperimental'nogo proyektirovaniya (for Tarasenko, Reynish).

TARASENKO, P.S., inzh.; SOKOLOVA, L.V., tekhn.red.

[The V 110-ZIL bicycle "Progress"; instructions for operation and specifications for spare parts] Velosiped V110-ZIL "Progress"; instruktsiia po ukhodu i spetsifikatsiia zapasnykh chastei. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 31 p. (MIRA 11:3)

1. Moskovskiy avtomobil'nyy zavod imeni I.A.Likhacheva. (Bicycles and tricycles)

TARASENKO, P.S.

ZIL-111 automobile. Avt. prom. no.5:1-3 My '60. (MIRA 14:3)

1. Moskovskiy avtozavod imeni Likhacheva.
(Automobiles)

GONCHAREVSKI[illegible], M.S., kand. tekhn. nauk; [illegible] [illegible], inzh.; [illegible]
E.T., inzh.; [illegible], inzh.; [illegible], inzh.

Effect of certain factors on the process of [illegible]
Proizv. truby no.12:114-116 [illegible]. [illegible]

MOLCHANOV, Ye.V.; SHVARTS, Z.S.; PETROVA, G.P.; CHERNAVINA, L.F.; TARASENKO, T.I.

Sixtieth birthday of Professor Aleksandr Prokhorovich Parfenov. Vop. kur., fizioter. i lech. fiz. kul't. 26 no.6:563-564 N-D '61. (MIRA 15:1)

(PARFENOV, ALEKSANDR PROKHOROVICH, 1901-)

PARFENOV, A.P.; TARASENKO, T.I.

Anesthesia of the human skin by novocaine and adrenaline electrophoresis. Vop. kur. fizioter. i lech. fiz. kul't. 28 no.3:247-250 My-Je '63. (MIRA 17:5)

1. Iz kafedry fizioterapii, kurortologii i lechebnoy fizicheskoy kul'tury Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

X TARASENKO, V.

TAMARIN, I., inzhener; TARASENKO, V., inzhener.

New drills for boring degasification holes. Mast.ugl. 6 no.2:17 F '57. (MLRA 10:4)

(Boring machinery)
(Mine gases)

BUGRIM, V.; KAPELYUSHNIK, M.; TARASENKO, V.; MALYSHEV, N.

Readers' suggestions. Fin.SSSR 18 no.1:64-67 Ja '57.
(MLRA 10:2)

1. Inspektor Zhitomirskogo kommunal'nogo banka (for Bugrim) 2. Notarius 1-y Dneprodzerzhinskoy notarial'noy kontory (for Kapelyushnik) 3. Zaveduyushchiy Stalinskim gorodskim finansovym otdelom. (for Tarasenko) 4. Glavnyy bukhgalter upravleniya gosudarstvennykh trudovykh sberegatel'nykh kass i goskredita Arzamasskoy oblasti. (for Malyshev).
(Finance)

TARASENKO, V., inzh.

Repair brigades are needed. Grazhd. av. 22 no.8:26-27 Ag '64.
(MIRA 18:8)

STOYANOVICH, O.; VLASOV, B.; STAL'NICHENKO, V.(Ukraina); DVORNICHENKO, S. (Ukraina) BARAYEV, I. (Leningrad); ISAYEV, N. (Moskva); TARASHENKO, V. (Ukraina); AVTONOV, G. (Moskva)

Champions are talking. Pozh. delo 5 no.10:14-15 O '59.
(MIRA 13:2)

1. L'vovskoye pozharno-tekhnicheskoye uchilishche (for Stoyanovich).
2. Khar'kovskoye pozharno-tekhnicheskoye uchilishche (for Vlasov).
(Physical education and training)

TARASENKO, Vasiliy Akimovich; SUYARKO, L.A., kand.istor.nauk, otvetstvennyy red.; GERMAN, M.A., red.; KHOKHANOVSKAYA, T.I., tekhn.red.

[Atomic problem in the foreign policy of the United states, 1945-1949] Atomnaia problema vo vneshnei politike SShA (1945-1949 gg.). [Kiev] izd-vo Kievskogo gos.univ. im. T.G.Shevchenko, 1958. 243 p. (MIRA 11:7)
(United States-- Foreign relations)
(Atomic weapons)

CHERNENKO, M.I., kand. tekhn. nauk; NEYMOVSKIY, A.M.; STEPANSKIY, I.S.; KIRVALIDZE, N.S.; PANYUSHKIN, A.V.; TARASENKO, V.A.; SHERSTYUK, Ya.P.

Extrusion of bimetallic pipe made of steel and copper. Met. i gornorud. prom. no.6:36-38 N-D '64. (MIRA 18:2)

L 41159-65 EWT(m)/EWP(t)/EWP(k)/EWP(b) Pf-4 JD S/0286/65/000/003/0043/0043

ACCESSION NR: AP5007176

AUTHOR: Vinichenko, G. G.; Tarasenko, V. A.; Shtan'ko, V. M.; Panyushkin, A. V.; Bobrov, V. G.; Komogorov, N. N.

17
B

TITLE: A cutting fluid for hot finishing of metals. Class 23, No. 167940

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 3, 1965, 43

TOPIC TAGS: cutting fluid

ABSTRACT: This Author's Certificate introduces a cutting fluid for hot finishing of metals. The fluid is based on common salt, graphite, mineral oil and sawdust. In order to avoid surface carburization, the fluid also contains zinc sulfate, a mixture of ferrous and ferric hydroxides and potassium sulfate.

ASSOCIATION: none

SUBMITTED: 30Mar64 ENCL: 00 SUB CODE: MT

NO REF SOV: 000 OTHER: 000

Card 1/1

ACCESSION NR: AT4036048 S/2781/63/000/003/0117/0124

AUTHORS: Shvets, O. M.; Tarasenko, V. F.; Ovchinnikov, S. S.; Tolok, V. T.

TITLE: Supply of high-frequency power to a plasma situated in a metal chamber

SOURCE: Konferentsiya po fizike plazmy* i problemam upravlyayemogo termoyadernogo sinteza. 3d, Kharkov, 1962. Fizika plazmy* i problemy* upravlyayemogo termoyadernogo sinteza (Plasma physics and problems of controlled thermonuclear synthesis); doklady* konferentsii, no. 3, Kiev, Izd-vo AN UkrSSR, 1963, 117-124

TOPIC TAGS: plasma heating, microwave plasma, plasma magnetic field interaction, plasma rotation, plasma confinement, ionized plasma, plasma density

ABSTRACT: The purpose of the investigation was to study the possi-

Card 1/4

ACCESSION NR: AT4036048

bility of feeding high-frequency power to a plasma contained in a metal chamber, and the behavior of the plasma under the influence of this power. It is possible to obtain in such a chamber a rotating plasma in crossed electric and magnetic fields, with high density, high degree of ionization, sufficiently long confinement time, but low ion temperature. The article describes the first stage of the experiments, which carried out without reconditioning the plasma in the working volume. A coaxial geometry was used and 3.3-Mc power was applied either through a blocking capacitor or without one. It was found that much more power can be fed to the plasma without a capacitor. The experiments have shown that high-power high-frequency generators can be used to produce a dense plasma in a metal chamber at relatively low voltages. The densities attained were 1.2×10^8 cm^{-3} at a generator voltage of 205 V, and 1.7×10^8 cm^{-3} at 220 V (approximate magnetic field 10^5 A/m). A low load impedance can be attained by preconditioning the plasma. The high-frequency power can be readily used for effective generation of waves to heat the

Card 2/4

ACCESSION NR: AT4036048

plasma. If the generator frequency is lower than the ion cyclotron frequency, the high-frequency generator can be used to produce a rotating plasma more effectively than in crossed electric and magnetic fields (using a radial capacitor discharge), since no arc is produced to contaminate the plasma with wall-chamber material. Plots showing the relations between the different plasma parameters are included. Orig. art. has: 8 figures and 2 formulas.

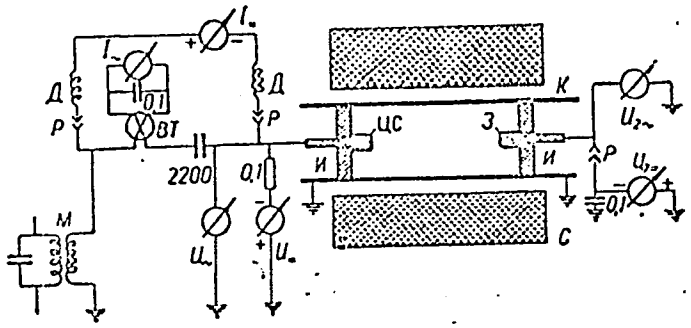
ASSOCIATION: None

SUBMITTED: 00	DATE ACQ: 21May64	ENCL: 01
SUB CODE: ME	NR REF SOV: 000	OTHER: 003

Card 3/4

ENCLOSURE: 01

ACCESSION NR: AT4036048



Schematic diagram of set-up

К - copper vacuum chamber, И - insulator, ЦС - central rod, З - probe, ВТ - high-frequency thermocouple, Д - high-frequency choke, Р - disconnect, М - coil for coupling to high-frequency generator, С - solenoid producing a homogeneous magnetic field

Card 4/4

ACCESSION NR: AT4036057 S/2781/63/000/003/0184/0192

AUTHORS: Shvets, O. M.; Ovchinnikov, S. S.; Tarasenko, V. F.; Tolok, V. T.

TITLE: Investigation of the properties of a plasma in crossed electric and magnetic fields

SOURCE: Konferentsiya po fizike plazmy* i problemam upravlyayemogo termoyadernogo sinteza. 3d, Kharkov, 1962. Fizika plazmy* i problemy* upravlyayemogo termoyadernogo sinteza (Plasma physics and problems of controlled thermonuclear synthesis); doklady* konferentsii, no. 3. Kiev, Izd-vo AN UkrSSR, 1963, 184-192

TOPIC TAGS: plasma research, plasma rotation, plasma magnetic field interaction, plasma electric field interaction, magnetic mirror, ionized plasma

ABSTRACT: Tests were made on a rotating plasma in crossed fields, confined by a system of magnetic mirrors. The installation consti-

Card 1/4

ACCESSION NR: AT4036057

tutes a coaxial copper chamber (inside and outside diameters 1.6 and 12.5 cm respectively, length 180 cm) placed in a homogeneous magnetic field that can be regulated from 0 to 20 A/m and in a radial electric field produced by capacitor bank of 1050 μF connected to the system through a discharge gap and six coaxial cables. The vacuum in the system was 1.33×10^{-4} n/m^2. Oscillograms were taken of the waveform of the plasma voltage, of the capacitor and short-circuit currents, of plasma-diamagnetism signals from a probe located in the working volume, and of the time dependence of the light, obtained with a photomultiplier. The results show that a plasma rotating in crossed electric and magnetic fields has many advantages over a plasma produced by other means. A rotating plasma can be retained for several hundred microseconds at densities on the order of 10^{15} cm^{-3} and high degree of ionization (~30%). The confinement time (650--1000 μsec) agrees well with the time of penetration of the magnetic field due to the azimuthal current through the chamber wall (~1000 μsec). It is therefore proposed that the plasma confinement

Card 2/4

ACCESSION NR: AT4036057

time is determined under these conditions essentially by the time of penetration of the magnetic field through the chamber wall. If this factor turns out to be decisive, then the penetration time of the field can be increased by increasing the wall conductivity and the wall thickness. The former can be done by cooling the chamber, but the latter entails attenuation of the field at the chamber walls. Experiments are continuing in this direction since an estimate indicates that the penetration time of the magnetic field through the chamber wall can be increased by three orders of magnitude. Orig. art. has: 6 formulas and 6 figures.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 21May64 ENCL: 01

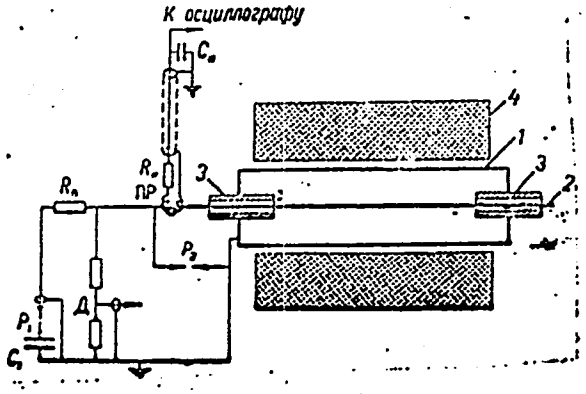
SUB CODE: ME NR REF SOV: 001 OTHER: 005

Card 3/4

ACCESSION NR: AT4036057

ENCLOSURE: 01

To oscilloscope



Schematic diagram of installation: 1 - copper vacuum chamber, 2 - central rod, 3 - porcelain insulator, 4 - solenoid producing a homogeneous magnetic field, P_1, P_2 - discharge gap, Д - voltage divider, ПР - Rogowski loop, C_1 - capacitor bank, $R_п$ - limiting resistor, $R_и$ $C_и$ - integrating network.

Card 4/4

L 49245-65 EWT(1)/EPF(n)-2/EWG(m)/EPA(w)-2 Pz-6/Po-4/Pab-10/Pi-4 IJP(c) WW/AT

ACCESSION NR: AP5010810 UR/0057/65/035/004/0717/0722

AUTHOR: Shvets, O.M.; Ovchinnikov, S.S.; Tarasenko, V.F.; Tolok, V.T. 64 59 B

TITLE: Investigation of the properties of a plasma in crossed electric and magnetic fields

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 4, 1965, 717-722

TOPIC TAGS: plasma rotation, plasma stability, plasma confinement, hydrogen plasma, electric field, magnetic field

ABSTRACT: The behavior of a hydrogen plasma was investigated in crossed radial electric and longitudinal magnetic fields. The plasma was contained in the 180 cm long annular space between two coaxial copper cylinders of diameter 1.6 and 12.2 cm. The radial electric field was produced by discharging a 1050 μfd capacitor across the two copper cylinders, and a longitudinal magnetic field up to 2500 Oe was produced by 24 water-cooled coils. Hydrogen was admitted and the system pumped continuously. During the operating cycle the current through the plasma and the potential across it were recorded. The luminosity was recorded with a photomultiplier, and there was a magnetic probe within the working volume. At the end of the operating cycle the plasma was short circuited with a spark gap. Two

Card 1/3

successive maxima of the luminous intensity were observed; the first is ascribed to local arc breakdown and the second to the formation of an electron zone near the anode. The plasma was found to remain in stable rotation for 650-1000 μsec. The duration of the stable rotation was nearly independent of the pressure, magnetic field strength, and capacity and charge of the capacitor bank, and was of the order of the time required for the magnetic field due to the plasma currents to penetrate the conducting wall of the chamber. It is concluded that during the stable period the plasma is confined by the magnetic field and that the duration of stable rotation could be greatly increased by increasing the conductivity of the chamber wall. Experiments to test this conclusion by cooling the wall of the chamber are under way. It is suggested that plasmas in crossed fields may find practical application in the construction of noninductive capacitors and high-power switching devices. "The authors express their deep gratitude to Academician K.I.Shchelkin for his support and interest in the work, and they also thank Ya.Volkov, I.M.Zolototrubov, O.G.Zagorodnov, and N.I.Nazarov for discussint the results of the experiments, and P.F.Peshkov for his active participation in the development and construction of certain parts of the apparatus." Orig. art. has: 6 formulas and 6 figures.

L 49245-65

ACCESSION NR: AP5010810

ASSOCIATION: None

SUBMITTED: 13Dec62 ENCL: 00 SUB CODE: ME

NR REF SOV: 001 OTHER: 004

Card 3/3

L 13449-66 EWT(1)/EWT(m)/ETC(F)/EPF(n)-2/EWG(m)/EWP(t)/EWP(b) IJP(c) JD/AT

ACC NR: AP6002441 SOURCE CODE: UR/0057/65/035/012/2185/2188

AUTHOR: Shvets, O.M.; Ovchinnikov, S.S.; Tarasenko, V.F.; Pavlichenko, O.S.; Tolok, V.T.

ORG: none

TITLE: Production of a dense plasma in a metallic chamber by a high frequency technique 21,44,55

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 12, 1965, 2185-2188

TOPIC TAGS: plasma generator, plasma electron temperature, plasma density, plasma heating, high frequency discharge, magnetic field

ABSTRACT: Dense (up to 2 x 10^{14} cm^{-3}) plasmas were produced in a 12.5 cm diameter, 2 m long cylindrical copper chamber of 2.5 mm wall thickness with glass ends by exciting two 5 cm diameter, 7 cm long aluminum electrodes located 1 m apart on the axis of the chamber at 1.82 MHz with a 100kW oscillator. A longitudinal magnetic field up to 2.5 kOe was provided by a suitable winding. The experiments are preliminary to a projected investigation of plasma heating by ion cyclotron waves. The plasma densities were determined from the Stark broadening of H β, observed with a 1.3 m focal length spectrometer, and from reflection of 3 cm and 0.8 cm wavelength microwaves. Electron temperatures were determined from the intensity ratio of triplet to singlet helium lines. Plasma densities were also determined from the intensity of H β on the assumption that excitation is entirely by electron impact; the densities

Card 1/2 UDC: 533.9.07

L 13449-66

ACC NR: AP6002441

so determined were in agreement with the values obtained from microwave reflection. Owing to the rectifying action of the plasma, the electrodes became negatively charged to a potential of several kilovolts; this gave rise to an oscillatory motion of the electrons near the axis of the chamber between the electrodes, as a result of which the dense plasmas were produced. The dense plasma was confined to a 2 cm diameter region about the axis; at 3 cm from the axis the plasma density was less by an order of magnitude. The plasma density did not depend strongly on the magnetic field strength. The maximum observed plasma density was 2×10^{14} cm^{-3} at a gas pressure of 3×10^{-3} mm Hg. The plasma density remained above 10^{13} cm^{-3} for 3.6 millisec, and above 10^{12} cm^{-3} for 17 millisec. Electron temperatures of 40 to 50 eV were observed. Advantages of the described technique are the low input impedance, which eliminated difficulties associated with high voltage rf systems, and the good coupling between the electrodes and the plasma. Orig. art. has: 2 formulas and 5 figures.

SUB CODE: 20 SUBM DATE: 18Feb65 ORIG. REF: 001 OTH REF: 002

Card 2/2

L 40922-66 EWT(l) IJP(c) GD/AT

ACC NR: AT6020564 SOURCE CODE: UR/0000/65/000/000/0026/0038

AUTHOR: Shvets, O. M.; Ovchinnikov, S. S.; Tarasenko, V. F.; Brshachko, L. V.; Pavlichenko, O. S.; Tolok, V. T.

58
57
B+1

ORG: none

TITLE: Study of the conditions for generating a dense plasma in a metal chamber and the high frequency heating of plasma

SOURCE: AN UkrSSR. Vysokochastotnyye svoystva plazmy (High frequency properties of plasma). Kiev, Naukovo dumka, 1965, 26-38

TOPIC TAGS: heated plasma, plasma density, plasma generator, argon plasma

ABSTRACT: The generation of plasma in a metal container and the properties of such a plasma were investigated. A diagram of the experimental apparatus is shown. Up to 100 kw can be generated at frequencies of $1.82 \cdot 10^6$ Hg. The magnetic field which can be produced in several configurations, has a maximum value of $2 \cdot 10^5$ A/m. The plasma diagnostics consist of: 1) voltage monitoring across the plasma column, which determines the coupling between the generator and the plasma load; 2) spectral measurements of plasma ions and impurity lines, giving the density and temperature of the ions; and 3) magnetic probe to determine the field distributions. A plasma density of $2 \cdot 10^{14}$ cm^{-3} and a temperature of $4 \cdot 10^5$°K were attained. Another set of experiments

Card 1/2

ACC NR: AT6020564

was performed to observe the launching of high frequency waves into the plasma to produce ion heating. The results of these experiments show that when argon plasma was used, an ion temperature of $2 \cdot 10^6$°K was reached. Since the ion temperature depends strongly on the applied voltage, it is concluded that higher voltage would result in hotter plasma. It was also shown that a mixture of two different ionic species can be effectively heated; the energy transfer mechanism, however, must be further investigated. Orig. art. has: 5 figures.

SUB CODE: 20/ SUBM DATE: 19Nov65/ ORIG REF: 002/ OTH REF: 001

Card 2/2 vmb

L 25505-66 EPF(n)-2/EWT(1)/EWT(m)/ETC(f)/EWG(m) IJP(c) AT/JD

ACC NR: AP6011387 SOURCE CODE: UR/0057/66/036/003/0443/0446

AUTHOR: Shvets, O.M.; Tarasenko, V.F.; Ovchinnikov, S.S.; Brzhechko, L.V.; Pavlichenko, O.S.; Tolok, V.T.

ORG: none

93
B

TITLE: Investigation of high frequency heating of a dense plasma in a metallic chamber

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 3, 1966, 443-446

TOPIC TAGS: plasma heating, ion temperature, cyclotron resonance, magnetic mirror machine, high frequency, hydrogen, helium, argon, helium plasma, hydrogen plasma, plasma charged particle, plasma density

ABSTRACT: This paper appears to be a sequel to an earlier paper by five of the present authors (ZhTF, 35, 1285, 1965). Hydrogen-helium and hydrogen-argon plasmas at pressures in the (1-3) x 10^{-3} mm Hg range with charged particle densities of the order of 10^{14} cm^{-3} were produced in the "Vikhr'" magnetic mirror machine and were heated by ion cyclotron waves which were produced in the vicinity of the magnetic mirror and propagated to the center of the discharge chamber where the magnetic field was weaker and corresponded to the proton cyclotron resonance. The 150 kW oscillator operated at a frequency of 1.82 MHz. The following advantages are claimed for the employed technique (which is not described in any detail in the present paper): the momentum initially imparted to the ion is perpendicular to the external magnetic field

Card 1/3

UDC: 533.9

and thus does not tend to drive the ion away from the region of the magnetic mirror; the conditions for producing the waves do not deteriorate with increasing plasma size or density; the input impedance is low; and energy can be introduced at two different frequencies if it is desired to heat both the ion and the electron components of the plasma. Regular oscillations at frequencies of the order of 20 kHz of the intensities of spectrum lines were observed at magnetic field strengths close to the proton cyclotron resonance. These oscillations appeared when waves were being excited in the plasma and were due to eccentric rotation of the plasma filament as a whole with respect to the axis of the chamber, as was confirmed by longitudinal observation with two photomultipliers mounted 3 cm from the axis. The ion temperatures were determined from the Doppler broadening of spectrum lines. The temperature of the additional gas (helium or argon) increased sharply as the strength of the magnetic field approached the proton cyclotron resonance value. Argon temperatures as high as 250 eV were observed. Temperatures of various impurity ions were also measured; these temperatures were independent of the mass of the impurity ion. The width of H_β interpreted as Doppler broadening, indicated a much lower temperature for hydrogen atoms than for the various ions. This is ascribed to the short life of a hydrogen atom in the plasma. The temperature of the plasma decreased rapidly with increasing distance from the axis, being down by a factor of 5 at 4 cm from the axis. The ion temperature increased rapidly with increasing high-frequency power, and much higher temperatures could apparently be achieved by increasing the high-frequency power and the magnetic field strength. It is concluded that a dense plasma containing two kinds of ions can be

L 25505-66
ACC NR: AP6011387

0

heated by resonance production of ion cyclotron waves in ions of one kind, but that the mechanism of energy transfer between the two different kinds of ions is not understood. Orig. art. has: 3 formulas and 4 figures.

SUB CODE: 20 SUBM DATE: 18Feb65 ORIG. REF: 002

Card 3/3

L 05917-67 EWT(1) IJP(c) AT

ACC NR: AR6032293 SOURCE CODE: UR/0275/66/000/007/A023/A023

46
B

AUTHOR: Shvets, O. M.; Ovchinnikov, S. S.; Tarasenko, V. F.; Brzhechko, L. V.; Pavlichenko, O. S.; Tolok, V. T.

TITLE: Investigation of conditions for the production of a dense plasma in a metal chamber and for its h-f heating

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 7A167

REF SOURCE: none

TOPIC TAGS: dense plasma, particle density, charged particle density, cyclotron ion wave

ABSTRACT: Conditions for producing a dense plasma on a "VIKHR'" system by means of high-powered frequency oscillators were investigated. Charged particle density was determined on the basis of the Stark widening of the line H_β and by SHF methods. Electron temperature was determined by the intensity ratios of the He lines. It was found that the density of the plasma produced in a metal chamber reached $\sim 10^{13}$ cm^{-3} at an electron temperature of 40 ev. Further action of

Card 1/2 UDC: 537.575

L 05917-67

ACC NR: AR6032293

cyclotron ion waves on the plasma resulted in an insignificant increase in the ion temperature of the basic gas (H_3) and a noticeable heating up of the ions of other gases which were present in the system (up to $\sim$200 ev). The mechanism of energy transmission by protons to other ions is not clear. Bibliography of 3 titles. [Translation of abstract]

SUB CODE: 09, 20/

kh

Card 2/2

SHUMILOV, Vasiliy Vasil'yevich; KAPLUNOV, Ivan Zakharovich; TARASENKO, Viktor Ivanovich; LATAUZOV, Aleksandr Grigor'yevich; AFONINA,G., redaktor; VUYEK,M., tekhnicheskiy redaktor

[Work of the ShBM-1 combine in mines of the Donets Basin] Rabota kombainov ShBM-1 na shakhtakh Donbassa. Kiev, Gos.izd-vo tekhn. lit-ry USSR, 1955. 90 p. (MLRA 9:3)
(Donets Basin--Coal mines and mining)

SHUMILOV,V.V. kandidat tekhnicheskikh nauk; TARASENKO,V.I.; GALKINA K.A. STARUSHENKO,A.S.; SHAPTALA,A.A.

Experience of dry dust catching in working with the ShBM-1 cutter-loader. Ugol' 30 no.5:46-47 My '55. (MLRA 8:6)

1. Mladshiy nauchnyy sotrudnik Donskogo nauchno-issledovatel'skogo ugol'nogo instituta (for Tarasenko) 2. Zaveduyushchaya laboratoriyey gigiyeni truda (for Galkina) 3. Mladshiy nauchnyy sotrudnik Instituta Fiziologii truda (for Starushenko) 4. Mladshiy nauchnyy sotrudnik Instituta Fiziologii truda (for Shaptala) (Donets Basin--Coal mining machinery) (Mine dust)

39755
S/126/62/014/001/011/018
E194/E435

24.2200

AUTHORS: Ignatchenko, V.A., Chistyakov, N.S., Tarasenko, V.I.

TITLE: Power absorption at super-high frequency during remagnetization of a thin ferromagnetic film

PERIODICAL: Fizika metallov i metallovedeniye, [illegible], v.14, no.1, 1962, 125-126

TEXT: Power absorption was observed when a thin ferromagnetic film located in a weak super-high-frequency (3.2 cm) field produced by a klystron generator is remagnetized by a low frequency sinusoidal field excited by a coil supplied from an audio frequency generator. The tests were made on permalloy discs 1000 Å thick, 16 mm diameter, prepared by evaporation in vacuo. Increase of the remagnetizing field applied along the axis of easy magnetization of the film did not affect the absorption peak except to reduce its base width. This indicated that high-frequency power is absorbed only during remagnetization of the film; the absorption intensity increased at the beginning of

Card 1/2

Power absorption at ...

remagnetization, reached a maximum and then tailed off to its initial value when remagnetization was completed. When the angle between the direction of remagnetization and the axis of easy magnetization coincided, strong absorption was observed; it was less near the direction of difficult magnetization. The absorption did not depend on frequency. The shape of hysteresis loop as function of the angle between the axis of easy magnetization and the direction of the remagnetizing field showed that remagnetization of the film occurred over a field range of 25 to 30 Oe. The observed phenomena are attributed to the formation of and changes in the domain structure during the remagnetization process. There are 2 figures.

ASSOCIATION: Institut fiziki SO AN SSSR (Institute of Physics SO AS USSR)

SUBMITTED: November 17, 1961 (initially)
February 10, 1962 (after revision)

Card 2/2

. TARASENKO, V K.

AUTHOR: Ginzburg, Z.I., Engineer SOV/122-58-7-30/31

TITLE: Production Engineering and Technical Session on the Exchange of Experience in the Utilisation of Natural Gas in Industrial Furnaces of Engineering Plants (Proizvodstvenno-tekhnicheskaya sessiya po obmenu opytom ispol'zovaniya prirodnogo gaza v promyshlennykh pechakh mashinostroitel'nykh zavodov)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 7, pp 86-87 (USSR)

ABSTRACT: The session was called by the Khar'kov sovnarkhoz (Khar'kov Economic Council), the metal-working section of the Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti (Scientific and Technical Society for the Engineering Industry) and the Institut ispol'zovaniya gaza v kommunal'nom khozyaystve i promyshlennosti AN USSR (Institute for Gas Utilisation in Communal Services and Industry at the Ac.Sc. Ukrainian SSR). V.K. Tarasenko Engineer of the Zavod transportnogo mashinostroyeniya (Transport Machinery Works) imeni Malysheva reported on experience in the operation of forge-heating furnaces and open-hearth furnaces with natural gas. The use of flameless injection burners is permissible in forging shops and rough-heat treatment shops when heating forging blanks

Card1/9

Production Engineering and Technical Session on the Exchange of Experience in the Utilisation of Natural Gas in Industrial Furnaces of Engineering Plants

of medium cross-section not subject to rigid control of mechanical properties. The use of flame-type two-channel burners is acceptable in all shops, including heat-treatment furnaces for finish treatment and furnaces for the heating of components and blanks of arbitrary cross-section subject to rigid control of mechanical properties. Such burners ensure a greater stability of the furnace. Gas burners cannot be placed anywhere in the working space of the furnace. Their optimum position is 400-450 mm above the sole of the furnace or 200-250 mm above the surface of the charge. In heat-treatment furnaces, especially with multi-layer charging, rapid heating is achieved by placing the burners at the furnace sole level. In co-operation with the Gas Utilisation Institute of the Ukrainian Ac.Sc., the lecturer's works developed a successful method for the heating of large ingots. Injector burners did not ensure the required uniformity and rate of ingot heating. 22 hours were needed for an ingot of 13 tons (compared with 10 hours with oil). The residual oil atomisers, type RDB, with

double atomisation, were used with changed nozzles. A torch type gas combustion was achieved which heated the ingots in 10 hours. The fuel cost per ton of output is reduced compared with oil. A typical value is 55 roubles compared with 80 in forge-heating furnaces. Forging and heat treatment shops have achieved automatic temperature control with the help of an electronic-hydraulic installation, designated RTEG-1. I.N. Karp, Engineer, of the Institute of Gas Utilisation, reported on work at the imeni Mayakovskiy Works to improve the combustion of natural gas in a 40-ton open-hearth furnace. The two-channel burner was replaced by a single-channel burner and the shape of the working space of the furnace was changed resulting in a significant improvement. The practice of working with furnaces fired by natural gas installed in the Khar'kovskiy traktornyy zavod (Khar'kov Tractor Works) was discussed by I.R. Bykov, Engineer. 97 heat-treatment furnaces and forge heating furnaces and 32 drying furnaces have been converted to a natural gas. Two-channel low-pressure burners of the Giprosel'mash design operating on a gas

Production Engineering and Technical Session on the Exchange of Experience in the Utilisation of Natural Gas in Industrial Furnaces of Engineering Plants

pressure of 250 mm water column and an air pressure of 300 mm water column were used. It was necessary to increase the gas pressure to 500-700 mm water column. The furnaces were modified from under-floor to side heating. Nemirovskiy, A.Ya., Engineer, of the Motorostroitel'nyy zavod (Engine Works) "Serp i Molot", reported on the conversion to natural gas of forge-heating furnaces and boilers. The former are equipped with injector burners of 5 sizes ranging from 6 to 18 m^3/h capacity. In the drop-hammer section, two-channel burners of 16-60 m^3/h capacity are used. The furnaces are equipped with screens to induce air circulation. It has been shown by gas analysis that, in using injector burners, the air excess coefficient is lower than in using two-channel burners. The coefficient amounts to 1.05-1.1. Increasing the loading of the hearth by reducing its surface area made it possible to reduce the specific fuel consumption and increase the furnace output. The drying kiln, the furnace for heating

Production Engineering and Technical Session on the Exchange of Experience in the Utilisation of Natural Gas in Industrial Furnaces of Engineering Plants

and firing of blocks and other units in the foundry have been converted to natural gas. Single-conduit, three-nozzle burners of 30-50 m^3/h capacity are used. Single-conduit multi-nozzle burners have given good service in boilers. Kopytov, V.F., Corresponding Member of the Ac.Sc. Ukrainian SSR, lectured on new heating methods in forging shops. Several variants exist for using natural gas in non-oxidising metal-heating furnaces. The construction of such furnaces is associated with the production of fire-bricks and fire-resistant materials for high-temperature recuperators and regenerators. At present, the Gas Utilisation Institute is working on the solution of a reliable non-oxidising heating method for forging and stamping. A.Ye. Yerimov, Engineer, of the Institute of Gas Utilisation, reported on the conversion of industrial furnaces from producer to natural gas. The existing gas-burning equipment can be used by simply reducing the cross-sections for gas flow. Kovalenko, V.V. of the IIG AN USSR (Institute of Gas Utilisation) lectured on drying kilns with infra-red gas heating when working with

Production Engineering and Technical Session on the Exchange of Experience in the Utilisation of Natural Gas in Industrial Furnaces of Engineering Plants

natural gas. The heating conditions are controlled by the gas flow or by connecting rows of radiating panels. A study carried out to determine conditions of drying for UE-11 and UE-41 enamels or of UVL-1 and ML-21 lacquers on the bodies of sewing machines has established that good drying takes place over the whole surface. With a temperature of 400-450 °C at the radiating surface, satisfactory drying is accomplished in 4-6 minutes without discoloration. The use of the mixture of the combustion products of natural gas and air as a heat carrier has made it possible to simplify and cheapen significantly the design of the drying plant and to increase its efficiency. The fuel consumption has been reduced by a factor of 2.2. The duration of drying has remained the same as in drying with air heated to the same temperature. Col'dinov, L.T., Engineer, of the Khar'kovskiy velozavod (Khar'kov Bicycle Works) delivered a paper on the possibilities of automation when using natural gas. Gas carburising in natural gas has been adopted in the Ts-60 furnace. The gas pressure is

 150-250 mm water column. The duration of carburising to a

depth of 1 mm is 4.5 hours. A tunnel furnace made of fireclay rings has been designed and built at the works. The furnace is heated with injector burners of medium pressure, and uses natural gas as a carburiser. In co-operation with the Gas Utilisation Institute, the design and construction of a high-speed heating furnace has been accomplished for the end faces of 32 mm dia rods, feeding a rod each 13-15 sec. An original design of a conveyor for transporting the rods from the furnace to the forging machine is being completed. The design, pursued by the lecturer, of a turbine burner of 30-40 m^3/h capacity uses the energy of high-pressure gas to drive a fan which forces air for combustion from the atmosphere and ensures a torch-type gas-combustion process. Dolginova , M.Ye., Engineer, of the Bakinskiy sudoremontnyy zavod (Baku Ship Repair Yard) imeni Parizhskoy Kommuny delivered a paper on the use of natural gas for the smelting of cast iron. The method developed and tested in practice, which dispenses with coke, consists of constructing alongside an ordinary cupola furnace a small reflecting furnace operating

Production Engineering and Technical Session on the Exchange of Experience in the Utilisation of Natural Gas in Industrial Furnaces of Engineering Plants

with natural gas. The furnace has three burners supplied by one air manifold and one gas manifold which ensure the simultaneous control of all burners. The practical utilisation of gas-fired cast iron melting furnaces has shown that cast iron with a carbon content below 3% can be produced. The high temperatures achieved make it possible to introduce up to 15-20% of steel scrap into the charge and also to accomplish modification of the cast iron. It is stated that cast iron melted with gas has a low sulphur content and is distinguished by higher mechanical properties. Zamalin, P.S., Engineer, of the Khar'kovskiy elektromekhanicheskiy zavod (Khar'kov Electro-mechanical Works) reported on experience with the burning of natural gas in industrial furnaces. Ter-Minok'yan, Engineer, of the Rostsel'mash spoke on the use of gas drying and the conversion of electric furnaces to natural gas.

SOV/122-58-7-30/31

Production Engineering and Technical Session on the Exchange of Experience in the Utilisation of Natural Gas in Industrial Furnaces of Engineering Plants

Levitan, R.B., Engineer, of the Khar'kovskiy zavod shveynykh mashin (Khar'kov Sewing Machine Works) reported on workshop heating with natural gas using calorifiers. There is 1 table.

Card 9/9

ORLOV, Vasiliy Vasil'yevich; PONOMARENKO, Aleksey Kuz'mich; GUDZ', Aleksandr Grigor'yevich; PETROV, Anatoliy Moiseyevich; TARASENKO, Vasiliy Konstantinovich; SIDYAK, A.Ya., otv. red.; VAYNBERG, D.A., red.; PLETENITSKIY, V.Yu., tekhn. red.

[Handbook of examples and problems on mining engineering] Sbornik primerov i zadach po provedeniiu gornykh vyrabotok. Khar'kov, Izd-vo Khar'kovskogo gos. univ. im. A.M.Gor'kogo, 1961. 352 p. (MIRA 15:2)
(Blasting) (Mining engineering)

TARASENKO, V.K.

"Manual on blasting operations." Reviewed by V.K. Tarasenko. Ugol' Ukr. 6 no.2:44-45 F '62. (MIRA 15:2)
(Blasting)
(Tarasenko, V.K.)

YEVSTRATOV, V.F.; DOGADKIN, B.A., red.; TARASENKO, V.M., red.; ZALEPUGIN, D.Ye., tekhn. red.

[Studies in the physics and chemistry of crude and vulcanized rubber] Issledovaniia po fizike i khimii kauchuka i reziny. Pod obshchei red. V.F.Evstratova i B.A.Dogadkina. Moskva, Goskhimizdat, 1950. 146 p. (MIRA 16:8)

1. Moscow. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

(Rubber)

GALKIN, N.P., doktor tekhn. nauk; SUDARIKOV, B.N., kand. khim. nauk; VERYATIN, U.D.; SHISHKOV, Yu.D.; MAYOROV, A.A.; BABUSHKINA, S.I., red.; TARASENKO, V.M., red.

[Uranium technology] Tekhnologiia urana. Moskva, Atomizdat, 1964. 395 p. (MIRA 17:12)

KOVTUN, I.P., kand.tekhn.nauk; TARASENKO, V.N., kand.tekhn.nauk; RYABTSEVA, Yu.V., mladshiy nauchnyy sotrudnik; DENISENKO, Z.Ya., master-instruktor

Activated air-entrained slag concrete. Stroi.mat. 5 no.9:35 S '59. (MIRA 12:12)

(Lightweight concrete)

TARASENKO, V.N., kand.tekhn.nauk

Making aerated cement using local materials. Sbor. trud. IUZHNII no.2:73-83 '59. (MIRA 13:9)

1. Yuzhnyy nauchno-issledovatel'skiy institut po stroitel'stvu.
(Cement)

SOV/137-57-6-10599

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 6, p 169 (USSR)

AUTHORS: Kukolev, G.V., Tarasenko, V.N.

TITLE: Heat-resistant Enamel Coatings (Zharostoykiye emalevyye pokrytiya)

PERIODICAL: Tr. Khar'kovsk. politekhn. in-ta, 1956, Vol 8, pp 195-204

ABSTRACT: An investigation of the feasibility of the protection of metal with heat-resisting enamel coating for the manufacture from ordinary steel of boxes for carburizing, parts of heating furnaces, crucibles, and other articles which should be resistant to gas corrosion. When the granulated frits of acid-resistant enamel are milled in a ball mill, various refractory additives previously milled in a similar mill are introduced. The grain size of the slip was 100% 900 mesh/cm^2 and 16-18% +6400 mesh/cm^2. The application of the slip of the under and outer coats of enamel was done by pouring. Two outer layers were applied over the undercoat, the second coat being applied after the first one had been fired and cooled. The firing of the heat-resistant outer layers was performed at the usual temperature (850-900°C). The thickness of the undercoat layer was 0.16-0.2 mm, that of the heat-resistant outer layers was 0.5-0.7 mm.

Card 1/2

Heat-resistant Enamel Coatings

The coatings were tested for heat resistance by means of soaking the specimens three times in a muffle furnace at 950-970° for six hours, cooling them in air after each heating, and checking the luster, shock resistance, and wear resistance. The tests established that upon firing and successive reheatings, the various refractory additives behave differently: Chromite dissolves poorly in the enamel melt and corundum dissolves only upon a prolonged exposure to heat, whereas technical alumina, diaspore, roasted kaolin, magnesite, and zircon dissolve rapidly. Enamels containing the following additives (in % of the total weight of the enamel with the additive): 1) corundum 50; 2) diaspore 30; 3) chromite 40, corundum 10; 4) chromite 30, technical alumina 30; and 5) chromite 30, diaspore 20, resist the action of 900-950° temperatures better than others.

G.Sh.

18(7) SOV/128-59-3-21/31

AUTHOR: Kukolev, G.V., Doctor of Technical Sciences, Tarasenko, V.N., Candidate of Technical Sciences

TITLE: Heat-Proof Enamel Coating Withstanding Liquid Aluminum.

PERIODICAL: Liteynoye Proizvodstvo, 1959, Nr 3, pp 45-46 (USSR)

ABSTRACT: Usually for melting and pouring of aluminum and other non-ferrous metals crucibles made of sheet metal covered with some refractory material are used. Tests already disclosed by the authors in an article published by the Khar'kov Polytechnical Institute in 1956 offer the possibility to use as a heat-proof coating enamel Nbr. 2/2 according to the catalogue of the branch office of NIIKhIMMASh in Khar'kov. There follows a description of the tests together with the list of the percentage of enamel coating together with the pertaining recipes. Given as percent values the coating contains: 63,32 SiO_2; 2,81 Al_2O_3; 4,75 CaO; 16,11 Na_2O; 1,7 B_2O_3; 4,27 TiO_2; 4,19 K_2O; 2,0 CaF_2; 0,42

Card 1/2

Heat-Proof Enamel Coating Withstanding Liquid Aluminum

Cr_2O_2; 0,32 CaO; 0,11 NiO. The tests have been carried out by constantly heating the enamel coated parts to temperature of 750° Celsius during 50 hours. There are 2 tables

89915

20504

15.2140

S/081/61/000/001/005/017
A005/A105

Translation from: Referativnyy zhurnal, Khimiya, 1961, No. 1, p. 292, # 1I152

AUTHORS: Kukolev, G.V., Tarasenko, V.N.

TITLE: The Effect of a Heatproof Cover on the Metal Oxidation at High Temperatures

PERIODICAL: "Tr.Khar'kovsk.politekhn.in-ta", 1959, Vol.31, No.1, pp. 135-138

TEXT: The authors studied the oxidation process of a metal under a coating of heatproof enamel at 870°C. The heatproof enamel coatings are efficiently applied to ordinary steels, in some cases also to highalloys. The protection from excessive and rapid metal oxidation, as during the calcining process at the coating as under exploitation conditions, is chiefly required of the heatproof coats. One obtained heatproof compositions by the addition of different heatproof materials to enamels of common compositions (2/2) or to low-melting eutectics. It is established that coatings are most effective that contain alumina and diaspore, and, in particular, these materials in connection with chromite.

N. Popova

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

Tarasenko, V. P.

Cand Agr Sci, Diss -- "Restoration of the spruce and broad-leaf plantings of the Bryansk Mountain Range". Moscow, 1961. 29 pp, 20 cm (Min of Higher and Inter Spec Educ RSFSR. Moscow Forest Engr Inst), 200 copies, Not for sale (KL, No 9, 1961, p 187, No 24398). [61-51130]

30526
S/194/61/000/008/089/092
D201/D304

9.3220 (1040)

AUTHORS: Medvedev, G.A. and Tarasenko, V.P.

TITLE: A threshold-comparison circuit

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1961, 24, abstract 8 K158 (Uch. zap. Tomskiy un-t, 1960, no. 36, 65-67)

TEXT: A description is given of an amplitude discriminator, producing a signal at the output when the analyzed voltage happens to be within the given interval. The arrangement consists of two threshold-comparator circuits, an inverter and a coincidence circuit. The threshold comparator is a Schmitt trigger with a summing amplifier at the input, so that the analyzed voltage is determined from the given threshold voltage. Such a system makes it possible to have the stability and rise time of the trigger independent of changes in the threshold level. 1 reference. [Abstracter's note: Complete translation]

Card 1/1

DOROSHENKO, Ye.V., inzh.; TARASENKO, V.P.

Experimental study of the spatial vibration and rigidity of the metal spans of railroad bridges. Trudy DIIT no.32:5-23 '61. (MIRA 16:2)

(Railroad bridges—Vibration)

TARASENKO, V.P., inzh.

Free spatial vibrations and the rigidity of the girder spans of metal bridges. Trudy DIIT no.32:32-62 '61. (MIRA 16:2)
(Railroad bridges—Vibration)

S/044/62/000/010/035/042
B160/B186

16.8000

AUTHOR: Tarasenko, V. P.

TITLE: Contribution to the question of optimal methods of extremal control in the presence of interference

PERIODICAL: Referativnyy zhurnal. Matematika, no. 10, 1962, 51, abstract 10V253 (Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, 1961, no. 40, 47-57)

/B

TEXT: Optimalizing control systems are discussed in which the operating time is determined by the operating time of the controlled object, by the rate of change of the optimal value of the object's characteristics, by the rate at which the system searches for this optimum and by the maximum (permissible) deviation of the characteristics from their extremum. The application of the Gauss-Seidel method in searching for the optimum value in the presence of interference is discussed. The optimality of the operation of an optimalizing control system is shown to be determined as a whole by the algorithms of the operation both of the analyzer and of the transmitter of the control variables. Questions connected with the optimal operation of the analyzer are discussed and

Card 1/2

Contribution to the question ... S/044/62/000/010/035/042
B160/B186

an algorithm for its operation is described. It is shown that minimum time for one control step is best ensured by using an optimal criterion based on Wald's method of successive analysis for evaluating the hypotheses. [Abstracter's note: Complete translation.]

Card 2/2

TARASENKO, V.P.

Improvement cuttings in oak stands planted in clusters on light-colored Chesnut soils in the southern Yergeni Hills. Agrobiologiia no.3:424-429 My-Je '62. (MIRA 15:10)

1. Kalmytskaya nauchno-issledovatel'skaya lesnaya opytnaya stantsiya, g. Elista.
(YERGENI HILLS--OAK) (YERGENI HILLS--FOREST MANAGEMENT)

ACCESSION NR: AP3002615 S/0280/63/000/003/0112/0120

AUTHOR: Tarasenko, V. P. (Tomsk)

TITLE: Step optimization systems with adaptive operating conditions

SOURCE: AN SSSR. Izv. Otd. tekh. nauk. Tekhnicheskaya kibernetika, no. 3, 1963, 112-120

TOPIC TAGS: automatic-control system, optimization-control system, adaptive-control system

ABSTRACT: A new system is suggested in which no repetition of trial steps (no storage) is used when the operation is far from optimum, and a fixed number of trial steps (storage) is used when the operation is close to optimum. A special "operating-conditions tuning unit" is suggested whose functions and limitations are described mathematically. Fundamental characteristics of the system are determined for both steady-state and transient conditions for the case of a

Card 1/2

ACCESSION NR: AP3002615

controlled object with a piecewise linear characteristic and additive noise. The claimed theoretical advantage of the new system is that both the average search time and the sustained error can comply with a wider class of requirements. Specifically, the new system is suitable when $\eta = \eta_{min}$ and $T < T^*$ conditions are to be met, where η is the sustained error, T is the average search time, and T^* is the average search time ensured by the storage-type system with $\eta = \eta_{min}$. It is claimed that this problem cannot be solved by any other automatic control system. Orig. art. has: 9 figures and 29 formulas.

ASSOCIATION: none

SUBMITTED: 22Oct62 DATE ACQ: 16Jul63 ENCL: 00

SUB CODE: IE NO REF SOV: 004 OTHER: 000

Card 2/2

MOKHOV, V.M. (Tomsk); TARASENKO, V.P. (Tomsk)

Effect of interference on step-by-step type optimalizing systems with sequential analyzers. Izv. AN SSSR. Tekh. kib. no.4:115-126 Jl-Ag '63. (MIRA 16:11)

ACCESSION NR: AR4020773 S/0271/64/000/002/A056/A057

SOURCE: RZh. Avtomat., telemekh. i vy*chislitel. tekhnika, Abs. 2A328

AUTHOR: Terasenko, V. P.

TITLE: Systems of automatic optimization by which blind search is realized

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta, vy*p. 42, 1963, 147-159

TOPIC TAGS: blind search, automatic optimization, extremal point, extremum

TRANSLATION: The problem of automatic determination of the extremum of the function $\Phi(x_1,\ldots of\ x_n)$, dependent on n variables, is examined. Since the nature of the function is not known beforehand and because it can have several extrema, the only satisfactory method of finding it is by blind search, wherein by one means or another all possible values of the arguments are scanned. Functional circuits are given for different models of blind search for the extremum. The single-scan circuit remembers the extremum and the coordinates of the extremal point in one sequential pass through all of the points being investigated. The double-scan device remembers the magnitude of the extremum in the

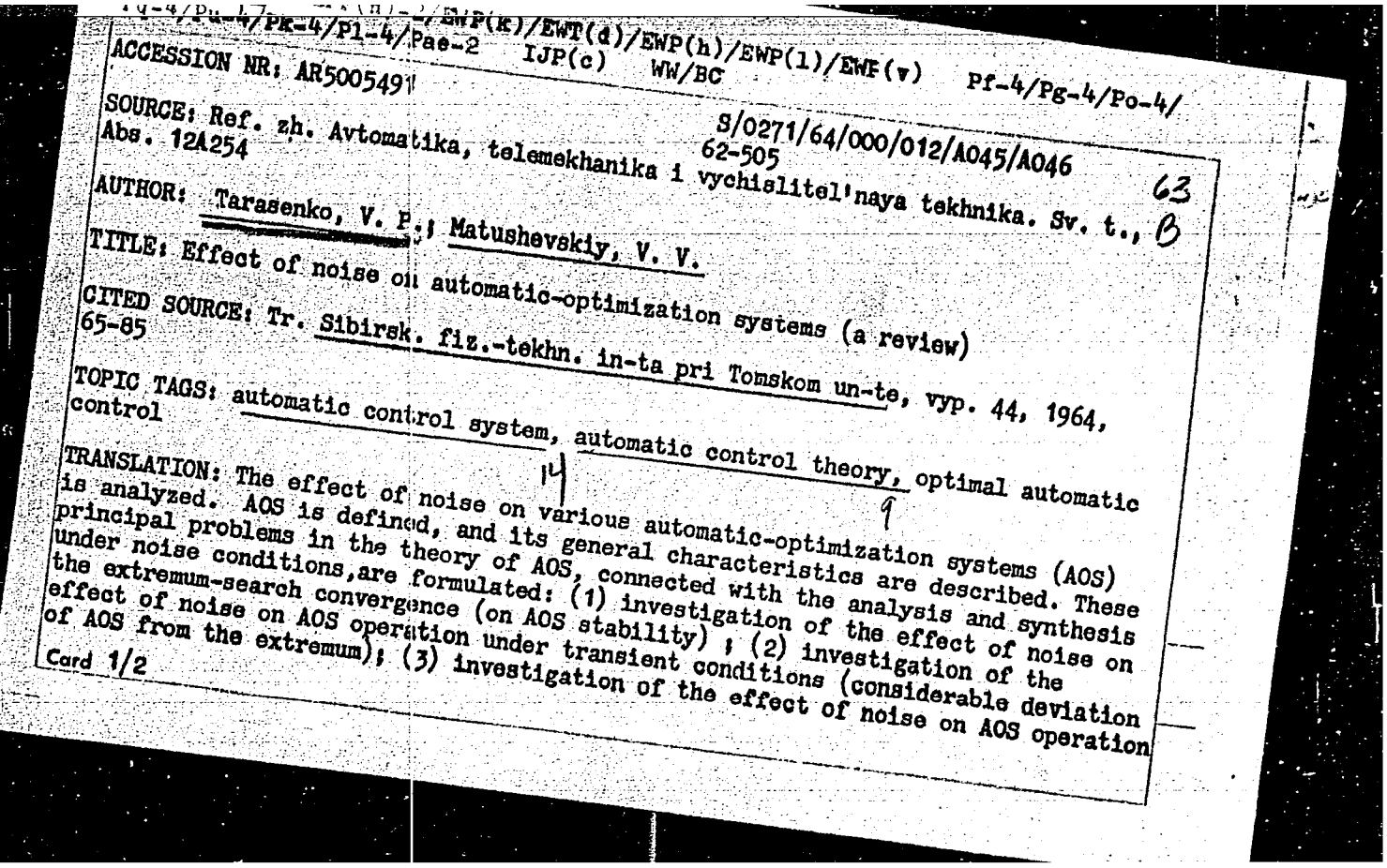
Card 1/2

ACCESSION NR: AR4020773

first search, and in the second the coordinates of the extremal point. This lengthens the search time but simplifies the system. In blind search one can use circuits acting in parallel which scan all of the points simultaneously. This obviates the need for memory units but requires a more complicated scanning system. Three models of parallel-search circuits are examined, differing in the way their comparison circuits are synthesized. Ideas are given on the numbers of elements (transistors, memory units, etc.) necessary to build the respective systems. In the author's opinion the circuits he proposes are not perfected models, and serve merely to illustrate the principles involved in building systems for finding an extremum. Orig. art. has 8 figs. and 8 refs. A. G.

DATE ACQ: 03Mar64 SUB CODE: MM, SD ENCL: 00

Card 2/2



Pk-4/Pl-4/Pae-2 EWP(k)/EWT(d)/EWP(h)/EWP(l)/EWP(v) Pf-4/Pg-4/Po-4/
IJP(c) WW/BC

ACCESSION NR: AR5005491 S/0271/64/000/012/A045/A046

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika. Sv. t., Abs. 12A254 62-505 63 B

AUTHOR: Tarasenko, V. P.; Matushevskiy, V. V.

TITLE: Effect of noise on automatic-optimization systems (a review)

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, vyp. 44, 1964, 65-85

TOPIC TAGS: automatic control system, automatic control theory, optimal automatic control

TRANSLATION: The effect of noise on various automatic-optimization systems (AOS) is analyzed. AOS is defined, and its general characteristics are described. These principal problems in the theory of AOS, connected with the analysis and synthesis under noise conditions, are formulated: (1) investigation of the effect of noise on the extremum-search convergence (on AOS stability); (2) investigation of the effect of noise on AOS operation under transient conditions (considerable deviation of AOS from the extremum); (3) investigation of the effect of noise on AOS operation

Card 1/2

L 62597-65
ACCESSION NR: AR5005491

under steady-state conditions (slight deviation of AOS from the extremum); (4) development of the method of synthesizing the best, in a certain sense, AOS with an allowance for noise effects. Only the articles covering the first three of the above problems are discussed. For a general functional AOS scheme, allowing for noise, this set of data necessary for solving the above problems is established: a mathematical description of the search algorithm realized by an optimizer; a mathematical description of the plant involved; methods of combining the noise with the regular signals produced by AOS; statistical characteristics of noise. Procedures for investigating the above problems and the AOS behavior characteristics are described. The investigation of the effect of noise on the sampled-data AOS and continuous AOS is considered in detail. The noise investigation problems important from practical viewpoint are described. The investigative methods used in the above problems are divided into three groups: the methods based on the theory of probability and mathematical statistics and used for analyzing the characteristics of the AOS functional scheme; the methods of the Markov theory which are applied by replacing the AOS functional scheme with a random-wander equivalent scheme; the physical and mathematical simulation methods. Principal results of the articles discussed in the review are listed. It is noted that, at the present time, the initial stage of the AOS noise-immunity theory is being completed. Seven illustrations. Bibliography: 58 titles.

Card 2/2 bjp SUB CODE: DP, IE ENCL: 00

L 41048-65 EPF(n)-2/EWT(d)/EWP(1) Pg-4/Pk-4/Pl-4/Po-4/Pq-4/Pu-4/Pae-2 IJP(c)
WW/BC

ACCESSION NR: AP5006277 S/0103/65/026/002/0268/0276

AUTHOR: Kutuzov, V. A. (Tomsk); Tarasenko, V. P. (Tomsk)

TITLE: Effect of noise on the operation of variable-parameter step-type extremal systems

SOURCE: Avtomatika i telemekhanika, v. 26, no. 2, 1965, 268-276

TOPIC TAGS: variable parameter control system, extremal control system, steptype control system, automatic control, automatic control design, automatic control system, automatic control theory

ABSTRACT: The effect of normal additive noise at the plant output upon a step-type extremal system under both transient and steady-state conditions is analyzed. An extremal system is considered which makes large step increments when far from the optimum and small steps near the optimum. Also, no information storage (repetition of trial steps and averaging the results) is used with large

Card 1/2

L 41048-65
ACCESSION NR: AP5006277

steps; however, it is used with small steps. Three variants of the extremal system are examined: (1) With a fixed value of the step and with a variable number of trials; (2) With a variable step and a fixed number of trials; (3) With both variable. General equations covering all three systems are set up and investigated with reference to a block diagram comprising the plant, the extremal controller, and a plant-state identifier. The average search time is determined and evaluated for all three systems under the conditions of any signal-to-noise ratio. Also, equations for and a method for calculating the steady-state error are developed. Orig. art. has: 6 figures and 28 formulas.

ASSOCIATION: none

SUBMITTED: 18Apr63 ENCL: 00 SUB CODE: IE, D

NO REF SOV: 006 OTHER: 002

Card 2/2

BONDAR', Nikolay Gerasimovich, doktor tekhn. nauk, prof.; KAZEY, Igor' Ivanovich, kand. tekhn. nauk; LESOKHIN, Bernard Falkovich, kand. tekhn. nauk; KOZ'MIN, Yuriy Georgiyevich, kand. tekhn. nauk, dots.; Prinimali uchastiye: TARASENKO, V.P., kand. tekhn. nauk; YAKOVLEV, G.N., kand. tekhn. nauk dots.; DOROSHENKO, Ye.V., kand. tekhn. nauk; NEVZOROV, I.N., inzh.; KONASHENKO, S.I., kand. tekhn. nauk, dots.; ORLENKO, V.P., inzh.; KHOKHLOV, A.A., kand. tekhn. nauk, dots.; ZELEVICH, P.M., kand. tekhn. nauk, red.

[Dynamics of railroad bridges] Dinamika zheleznc-dorozhnykh mostov. [By] N.G.Bondar' i dr. Moskva, Transport, 1965. 411 p. (MIRA 18:12)

L 09265-67 EWT(d)/EWT(l)/EWP(h)
ACC NR: AP6029998 SOURCE CODE: UR/0413/66/000/015/0199/0199

51

INVENTOR: Tarasenko, V. P.

ORG: none

TITLE: A device for directing the flight of aircraft. Class 72, No. 184179

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 199

TOPIC TAGS: flight control system, aircraft, auxiliary aircraft equipment, aircraft guidance equipment

ABSTRACT: This Author Certificate presents a device for directing the flight of aircraft as described in Author Certificate No. 183625. To simplify the process of directing, the focal plane of the optical correlator of the device contains a mosaic photoresistor which serves for determining the coordinates of the greatest value of the correlation function for comparing the image of a locality on the radar screen with the charts of the radar image of a terrain along the flight route. A diode circuit for determining the coordinates of that element of the mosaic photoresistor to which the greatest voltage is correlated is also included.

SUB CODE: 01/13/ SUBM DATE: 27Mar61

UDC: 623.4.054.93

Card 1/1

ACC NR: AP7002650 SOURCE CODE: UR/0413/66/000/023/0199/0199

INVENTORS: Tarasenko, V. P.; Biryulin, P. P.

ORG: none

TITLE: A flight-control device for aircraft. Class 72, No. 183625

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 199

TOPIC TAGS: aircraft, aircraft automatic pilot, aircraft control equipment, aircraft flight instrument, aircraft guidance equipment, radar control, radar equipment, radar guidance, radar map matching, radar navigation

ABSTRACT: This Author Certificate presents a flight-control device for aircraft. The device contains side-mounted radar equipment, a unit for matching the image of a district on the radar screen with the radar maps of this district along the itinerary, an optical correlator, and an autopilot. A projecting system is used to automate the output for the autopilot and the tape-actuating mechanism of the cards for discrete directing electrical signals of the transvere and the lateral deviations of the aircraft position from the desired position. This system projects the image of the correlation functions onto an iconoscope screen with a memory unit and with a unit for electronic automatic analysis of the image. The latter unit serves to determine the coordinates of the maximum brightness point and produces electrical signals. These signals are proportional to the coordinates of the aircraft deviation from the position established by the flight program.

SUB CODE: 01, 17/ SUBM DATE: 17Mar60

Card 1/1 UDC: 623.4.054.93

ACC NR: AP7005347 SOURCE CODE: UR/0181/67/009/001/0200/0208

AUTHOR: Savchenko, M. A.; Tarasenko, V. V.

ORG: Physicotechnical Institute, AN UkrSSR, Khar'kov (Fiziko-tekhnicheskiy institut AN UkrSSR)

TITLE: Parametric phenomena in helicoidal magnetic structures

SOURCE: Fizika tverdogo tela, v. 9, no. 1, 1967, 200-208

TOPIC TAGS: parametric resonance, magnetic structure, spin wave, kinetic equation, excitation energy, magnetic susceptibility

ABSTRACT: The article is devoted to parametric phenomena in helicoidal structures of the "simple magnetic helix" type, in which the spin of the atom lies in the basal plane perpendicular to the hexagonal axis, and rotates on going from atom to atom along the hexagonal axis (similar to that observed in $TbMn_2$ or $MnAu_2$). An analysis of the kinetic equations and of the combination effects in the structures makes it possible to determine the thresholds of the excitation of spin waves by an alternating magnetic field and of spin waves by spin waves. The nonstationary density matrix method, proposed by the authors earlier (ZhETF v. 51, 482, 1966), is used to calculate the excitation thresholds. It is shown that when the spin waves are excited by the alternating magnetic field, the smallest excitation threshold is obtained when the wave vector of the field is parallel to the hexagonal axis of the crystal. When the spin waves are excited by spin waves, the smallest threshold is obtained for spin

Card 1/2

ACC NR: AP7005347

waves having an energy half that of the pumping spin waves. The stationary state of the excited waves is found and an expression is obtained for the imaginary part of the susceptibility. Combination effects connected with the redistribution of the occupation numbers of the spin waves among the energy levels are also considered. It is found that in the case of electromagnetic pumping the interaction is realized between energy levels of the radio-frequency band and the optical band (10^{10} and 10^{13} sec^{-1}, respectively). The results point to the possibility of experimentally observing the discussed phenomena. The authors thank V. G. Bar'yakhtar for valuable discussions and interest in the work. Orig. art. has: 37 formulas.

SUB CODE: 20/ SUBM DATE: 20Jun66/ ORIG REF: 005/ OTH REF: 010

Card 2/2

TARASENKO, V.S.; KAMENICHNYY, I.S.; SHVINDLERMAN, L.S.

Causes for the appearance of porosities on the working surfaces of cast iron tractor sleeves. Lit. proizv. no.1:36-38 Ja '62. (MIRA 16:8)

(Cast iron—Metallography)

NOSKOV, Boris Alekseyevich, kand. tekhn. nauk; DEN'GIN, Igor' Nikolayevich, kand. tekhn. nauk; TARASENKO, V.S., inzh., retsenzent

[Using natural gas for the melting of cast iron] Primenenie prirodnogo gaza pri vtorichnoi plavke chuguna. Kiev, Tekhnika, 1964. 114 p. (MIRA 17:8)